

PRC-001-AB-1 R5 &R7.1 GFO’s Notification Requirement

Table 1 Relay Setting Notification Requirements

Protection System	Notification Required	Notification Not Required
Function 21 Relay Generator Phase Distance		Change of R-X plane trip setting in primary ohms at the generator terminals
		Change of relay trip timer settings
		Change in total clearing times for the generator breakers Relay
Function 21L Relay Line Phase Distance	Change of impedance trip zone reach settings	
	Change of relay trip zone timer settings	
Function 24 Relay Overexcitation (Volts/Hz)		Change of V/Hz trip setting
		Change of relay trip timer setting
		Change of relay inputs
Function 27 Relay Generator Unit UV(undervolatage)	Change of voltage trip primary setting	
	Change of relay trip timer setting	
Plant Auxiliary MV System UV	Change of voltage primary setting	
	Change of relay timer setting	
High Voltage Side UV	Change of voltage trip primary setting	
	Change of relay trip timer setting	

Example of a GFO’s Criteria for Protection System Change Notification

Protection System	Notification Required	Notification Not Required
Function 32 Relay Reverse Power		Change of Reverse Power setting in percentage and relay timer setting
Function 40 Relay Loss of Field (LOF)		Change of impedance trip zone reach
		Change of relay trip timer setting
Function 46 Relay Negative Phase Sequence overcurrent		Change of negative phase sequence overcurrent alarm/trip setting
		Change of relay trip timer setting
Function 50/27 Relay Inadvertent Energizing		Change of undervoltage setting
		Change of current detector pick up setting
		Change of relay timer setting
Function 50/51L Transmission Line O/C Relay	Change of O/C trip settings	
	Change of relay trip timer settings	
Function 50BF Relay Breaker Failure	Change of relay trip timer setting	
Function 50/51T/51TG Relay Back up Overcurrent for GSU	Change of phase overcurrent trip primary setting	
	Change of ground overcurrent trip setting	
	Change of relay trip timer setting	

Protection System	Notification Required	Notification Not Required
	Change in total clearing time for generator breaker	
Function 51V Relay Voltage Controlled/Restrained Overcurrent		Change of controlled/ restrained voltage trip primary setting
		Change of overcurrent trip primary setting
		Change of relay trip timer setting
Function 59 Relay Overvoltage	Change of over-voltage trip primary setting	
	Change of relay trip timer setting	
Function 59GN/27 Relay Stator Ground		Change of relay timer setting
Function 78 Relay Out of Step		Change of impedance trip zone blinder setting
		Change of relay trip timer setting
		Change on protection scheme
Function 81 Relay Over/Under frequency		Change of frequency trip setting
		Change of relay trip time setting
Function 87L Relay Transmission Line Differential		No notification is required for protection setting change of any existing differential protection
Function 87G/T/U Relay Generator/Transformer/GSU Differential		No notification is required for protection setting change of any existing differential protection

Table 2 Device Changes notification requirements

Device Change	Notification Required	Notification Not Required
Relay Device Type/Make	New relays whose settings are classified as Notification Required in Table 1; Change of relay type/make whose settings are classified as Notification Required in Table 1.	New relays whose settings are classified as Notification Not Required in Table 1; Change of relay type/make whose settings are classified as Notification Not Required in Table 1. Change of relay type/make but not impact relay setting
Associated communication systems		No notification is required for change of associated communication systems
Voltage and Current Sensing Devices	Change of voltage and current sensing devices which are connected to the relays whose setting changes are classified as Notification Required in Table 1. or, Change of voltage and current sensing devices that supply voltage and current to the other parties.	Change of voltage and current sensing devices which are connected to the relays whose setting changes do not need to be notified in Table 1. and, Change of voltage and current sensing devices that do not supply voltage and current to the other parties.
Station Battery		Change of Station Battery Banks and Battery Chargers
DC Control Circuitry		No notification is required for change of DC control circuitry
Generator	Change of generator rating capacity or operating capacity that may required changes	

Device Change	Notification Required	Notification Not Required
	in protection systems of others	
GSU Transformer	Change of transformer rating capacity or transformer replacement	
Breaker		No notification is required for change of breaker.

Typical Protection System for Generator

